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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,312	10/17/2001	Mark Peterson	IFC 30-1	6602

7590 03/10/2003

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EXAMINER

CRUZ, MAGDA

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 03/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/982,312

Applicant(s)

PETERSON ET AL.

Examiner

Magda Cruz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 03/11/2002 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "lens positioned adjacent the reflective surface" (Claim 4) and "each lens having a shape, wherein the shapes of the lenses are graduated along the height of the screen" (Claim 5) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. In claim 9, the phrase "wherein the image source is positioned outside of the casing" renders the claim to be indefinite. By definition, a rear projection "uses a translucent screen onto which *an image is projected from the back side*" (Encyclopedia of Photography, Third Edition, 1993, pp. 685-686). The applicant is respectfully requested to clarify said phrase.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 28-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi, et al.

Takahashi, et al. (US Patent Number 4,729,631) discloses a rear projection display system (Figure 16B) comprising an image source (P), a rear reflective surface (M), a screen (S) including a lens array (column 7, lines 25-26) and a mirror (M) array positioned adjacent the lens array (see Figures 16A-16C), wherein the lens array a plurality of lenses (Figure 13) configured to direct light incident on the screen (S) from a first angle onto the mirror array to be reflected toward the rear reflective surface, and

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wherein the screen is configured to direct incident light from a second angle through the mirror array for display to a viewer (column 7, lines 34-45; Figures 16B and 16C). The screen (S) includes an internal reflection element (Figure 4) configured to internally reflect light incident on the screen (S) from a first angle (θ_1) toward the rear reflective surface, and to transmit incident light from a second angle (θ_2) through the screen (S), wherein the internal reflection elements includes a plurality of prism elements (1) having a generally pyramidal cross-sectional shape (Figure 9). The video system includes a cabinet (column 1, lines 5-6) and the screen (S) includes a flat display portion (i.e. substrate), wherein the internal reflection element includes a material of a higher index of refraction than the flat display portion filling the cabinet adjacent the flat display portion of the screen (column 7, lines 31-35).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi, et al. in view of Kato et al.

Takahashi, et al. (US Patent Number 4,729,631) teaches the salient features of the present invention, except a plurality of angularly discriminating reflective elements

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configured to reflect light, having a dark color for improved contrast, wherein the screen includes a plurality of vertical pixels; and wherein said screen is configured to reflect light incident on the screen. However, Takahashi, et al. discloses prisms (1; i.e. reflection element) coaxially extended in the horizontal direction on the screen.

Kato et al. (US Patent Number 4,066,332) discloses a plurality of angularly discriminating reflective elements (5) configured to reflect light, having a dark color for improved contrast (column 1, lines 54-58), wherein the screen includes a plurality of vertical pixels (column 5, lines 47-50); and wherein said screen is configured to reflect light incident on the screen (column 2, lines 3-5).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the plurality of angularly discriminating reflective elements disclosed by Kato et al. in substitution of the reflection element disclosed by Takahashi, et al.'s invention, for the purpose of having an luminance range sufficient to faithfully reproduce the density range of a projected image (column 1, lines 11-13).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Naito (US Patent Number 6,276,802 B1) discloses a rear projection display for displaying an image thereon by projecting the image from the rear side of the screen.

Martínez (US Patent Number 5,111,337) teaches an enhanced contrast, maximum gain rear projection screen.

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Shioda, et al. (US Patent Number 4,439,027) shows a rear projection apparatus in which the luminous flux can be converged in the direction of a viewer so that there can be presented an optimum viewing area for the viewer.

Heijnemans, et al. (US Patent Number 4,963,016) discloses a compact rear-projection system with obliquely incident light beam.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magda Cruz whose telephone number is (703)308-6367. The examiner can normally be reached on Monday through Thursday 8:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on (703)308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9318 for regular communications and (703)872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1782.



RUSSELL ADAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Magda Cruz
Patent Examiner
March 4, 2003